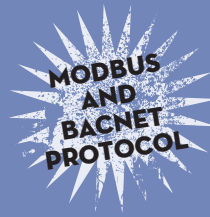


Deluxe Wall CO₂ Sensor, Protocol Communication

Individual or 3-in-1 with Modbus and BACnet Protocol Communication



CWLP



CWXP

DESCRIPTION

CW Protocol Series is a non-dispersive infrared (NDIR) sensor designed for measuring CO₂ concentration in ventilation systems and indoor living spaces. Its measurement range of 0-5000 ppm makes it the premier solution for meeting ASHRAE and other ventilation efficiency standards.

CW Protocol devices feature embedded BACnet and Modbus communication protocols, as well as temperature and optional humidity sensors. An adjustable setpoint relay is provided for direct control and alarm applications, and the setpoint slider and pushbutton override offer additional local input.

APPLICATIONS

- Facilitating compliance with ASHRAE and other air quality standards
- Office buildings, schools, or other systems utilizing BACnet or Modbus protocol

FEATURES

- Embedded BACnet and Modbus communication protocols...easy systems integration
- Configurable to multiple baud rates...transfer data at the right speed for the system
- CO₂, humidity, and temperature sensors in one device at one address...provides more information and maximizes system capacity
- Local feature override capability from the building control system...added control and flexibility
- Innovative self-calibration algorithm...maximizes performance
- Field calibratable...minimize downtime
- Available with 2% NIST or 2% standard RH

SPECIFICATIONS



| | |
|--|--|
| Input Voltage | 12 to 30VDC, 24VAC; 100mA max. |
| Operating Temperature Range | No humidity option: 0° to 50°C (32° to 122°F); With humidity option: 10° to 35°C (50° to 95°F) |
| Operating Humidity Range | 0-95% RH noncondensing |
| Housing Material | High impact ABS plastic, UL 94 V0 |
| Protocol | BACnet or Modbus (selectable) |
| Connection | 2-wire RS-485 |
| Data Rate | 9600, 19200, 38400, 57600 (Modbus), bps (selectable); 9600, 19200, 38400, 76800 (BACnet), bps (selectable) |
| Parity | None/Odd/Even (selectable-Modbus); None (BACnet) |
| Address Range | 1-127 |
| <i>CO₂ Transmitter:</i> | |
| Sensor Type | Non-dispersive infrared (NDIR) diffusion sampling |
| Measurement Range | 0-5000 ppm |
| Accuracy | ± 30 ppm ±2% of measured value* |
| Repeatability | ±20 ppm ±1% of measured value |
| <i>RH Transmitter Option:</i> | |
| HS Sensor | Replaceable digitally profiled thin-film capacitive ; (32-bit mathematics); U.S. Patent 5,844,138 |
| Accuracy** | ±1% from 12 to 60% RH; ±2% from 10 to 80% RH; NIST traceable multi-point calibration |
| Reset Rate*** | 24 hours |
| Stability | ±1% @ 20°C (68°F) annually for two years |
| Hysteresis | 1.5% typical |
| Temperature Coefficient | ±0.1% RH/°C above or below 25°C (typical) |
| <i>Temperature Transmitter Option:</i> | |
| Sensor Type | Solid-state, integrated circuit |
| Accuracy | ±0.5°C (±1°F) typical |
| Resolution | 0.1°C (0.2°F) |
| Range | 10° to 35°C (50° to 95°F) |
| <i>Relay Contacts:</i> | |
| 1 Form C (SPDT) | 1A@30VDC, resistive; 30W max. |
| Setpoint Slider Resolution Option | 1% full scale |
| Override Button Option | Remotely readable and resettable |

EMC Conformance: Low voltage directive 2006/95/EC and EMC directive 2004/108/EC.

EMC Special Note: Connect this product to a DC distribution network or an AC/DC power adaptor with proper SURGE PROTECTION (EN 61000-6-1:2007 specification requirements)

* Measured at NTP

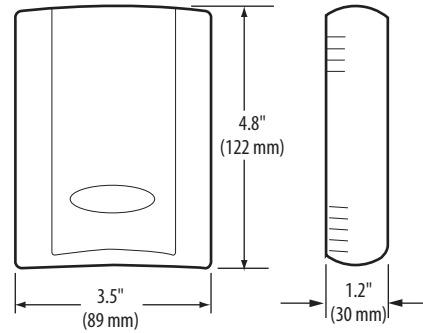
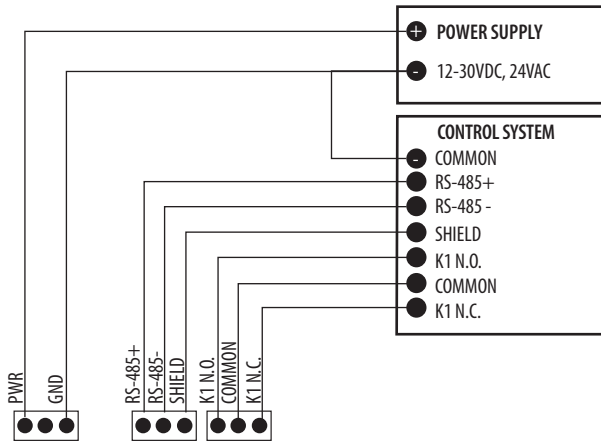
** Specified accuracy with 24VDC supplied power with rising humidity.

*** Reset rate is the time required to recover to 50% RH after exposure to 90% RH for 24 hours.

Note: Rough handling and transportation may cause a temporary reduction of CO₂ sensor accuracy. With time, the ABC function will tune the readings back to the correct accuracy range. The default tuning speed is limited to 30 ppm per week.

APPLICATION/WIRING DIAGRAM

DIMENSIONAL DRAWING



ORDERING INFORMATION

ACCESSORIES

| Local Display | Protocol | RH Option | Temp. Option | Temp. Cal. Cert. | Option | Housing |
|-----------------------------|----------------------------|--|---------------------------------------|---|--|--|
| CW <input type="checkbox"/> | <input type="checkbox"/> P | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| L = LCD X = No Display | = Protocol | X = No RH 2 = RH 2% NIST H = RH 2% | X = No temp. T = Temp. transmitter | X = None 1 = 1 pt. cal. cert.* 2 = 2 pt. cal. cert.* 3 = 3 pt. cal. cert.* | Blank = None 1 = Pushbutton override 2 = Set point slider 3 = Pushbutton override + set point slider | Blank = Cloud white B = Black |

Duct Aspiration Box and Outdoor Aspiration Box (AA35, AA36)
Calibration kits and gases (AA01, AA26, AA27, AA28, AA29)
Handheld air quality testers (1010, 1008, 770)

Example:

CW L P H T X 3

* Only available if temperature option is selected.

